

PATENT

Attorney Docket No: BRI/016

**Amendments to the claims:**

The following listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. (currently amended) A pyrotechnic circuit breaker for use in an electrical circuit comprising:
  - a) an electrically conductive portion including means for secure incorporation of the portion into the electrical circuit, ~~wherein said electrically conductive portion is a fuse or is formed to be readily ablated or cut;~~
  - b) a pyrotechnic igniter including an output end, said igniter secured so that said output end is oriented toward said electrically conductive portion;
  - c) a passage between said output end of said pyrotechnic igniter and said electrically conductive portion;  
[[and,]]
  - d) a rupture area adjacent said electrically conductive portion and on the opposite side of said electrically conductive portion from said pyrotechnic igniter output end;
  - e) a housing formed of polymer; and,

PATENT

Attorney Docket No: BRI/016

f) a projectile molded into said housing, between said pyrotechnic igniter and said electrically conductive portion;

wherein said electrically conductive portion is formed to be readily cut by said projectile.

2. (original) The circuit breaker of claim 1, further comprising a housing, wherein said rupture area is defined in said housing.

3. (canceled)

4. (original) The circuit breaker of claim 1, wherein said electrically conductive portion is a current load-based fuse.

5. (canceled)

6. (currently amended) The circuit breaker of claim 4 [[5]], wherein said fuse is a bolt-on fuse strip.

7. (original) The circuit breaker of claim 1, wherein said electrically conductive portion is formed to receive a direct ablation force from the pyrotechnic igniter.

8. (original) The circuit breaker of claim 7, wherein said electrically conductive portion includes an area that is

## PATENT

Attorney Docket No: BRI/016

flattened in a plane generally perpendicular to the output of said pyrotechnic igniter.

9. (original) The circuit breaker of claim 7, wherein said electrically conductive portion includes an enlarged impact area that is enlarged in a plane generally perpendicular to the output of said pyrotechnic igniter.

10. (original) The circuit breaker of claim 7, wherein said electrically conductive portion includes an area that is flattened and enlarged in a plane generally perpendicular to the output of said pyrotechnic igniter.

11. (original) The circuit breaker of claim 8, wherein said electrically conductive portion is a current load-based fuse.

12. (original) The circuit breaker of claim 11, wherein said fuse is a bolt-on fuse strip.

13. (canceled)

14. (canceled)

15. (currently amended) The circuit breaker of claim 1   
 [[13]], wherein said electrically conductive portion   
 includes an enlarged impact area that is enlarged in a

## PATENT

Attorney Docket No: BRI/016

plane generally perpendicular to the output of said pyrotechnic igniter.

16. (currently amended) The circuit breaker of claim 1 ~~[[13]]~~, wherein said electrically conductive portion includes an area that is flattened in a plane generally perpendicular to the output of said pyrotechnic igniter.

17. (original) The circuit breaker of claim 16, wherein said electrically conductive portion is a current load-based fuse.

18. (currently amended) The circuit breaker of claim 1 ~~[[13]]~~, wherein said electrically conductive portion has a periphery, and said rupture area has a perimeter selected so as to minimize the clearance between said rupture area and said electrically conductive portion.

19. (original) The circuit breaker of claim 16, wherein said electrically conductive portion has a periphery, and said rupture area has a perimeter selected so as to minimize the clearance between said rupture area and said electrically conductive portion.

20. (currently amended) A pyrotechnic circuit breaker for use in an electrical circuit comprising:

## PATENT

Attorney Docket No: BRI/016

a) a current load-based fuse including means for secure incorporation of the portion into the electrical circuit, said fuse being an integral single piece and having a uniform thickness;

b) a pyrotechnic igniter including electrical leads and an output end, said igniter secured so that said output end is oriented toward said fuse;

c) a passage between said output end of said pyrotechnic igniter and said fuse; and,

d) a rupture area adjacent said fuse and on the opposite side of said fuse from said pyrotechnic igniter output end.

21. (currently amended) A pyrotechnic circuit breaker for use in an electrical circuit comprising:

a) an electrically conductive portion including means for secure incorporation of the portion into the electrical circuit, wherein said electrically conductive portion has an impact area and a periphery and is formed to receive a direct ablation force ~~be readily ablated or cut;~~

b) a pyrotechnic igniter including electrical leads and an output end, said igniter secured so that said output

## PATENT

Attorney Docket No: BRI/016

end is oriented toward said electrically conductive portion;

c) a passage between said output end of said pyrotechnic igniter and said electrically conductive portion; and,

d) a rupture area having a perimeter adjacent said electrically conductive portion and on the opposite side of said electrically conductive portion from said pyrotechnic igniter output end;

wherein said impact area is flattened and/or enlarged in a plane generally perpendicular to the output of said pyrotechnic igniter and said perimeter is selected to leave a minimal clearance between said rupture area and said periphery.

22. (currently amended) The circuit breaker of claim 21, wherein said electrically conductive portion is a current load-based fuse.

23. (new) The circuit breaker of claim 22, wherein said fuse is a bolt-on fuse strip.

24. (new) The circuit breaker of claim 21, wherein said electrically conductive portion has a narrowed region between said passage and said rupture area.

## PATENT

Attorney Docket No: BRI/016

25. (new) The circuit breaker of claim 20, wherein said fuse is a bolt-on fuse strip.

26. (new) The circuit breaker of claim 20, wherein said fuse has a narrowed region between said passage and said rupture area.